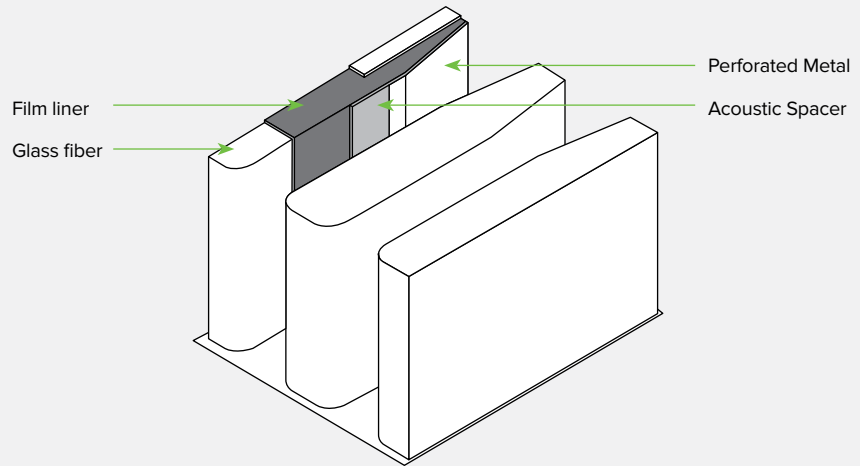


## RFL

Rectangular  
Film Lined  
Straight Silencers



### Description

**VIBRO-ACOUSTICS' RFL SILENCERS** use acoustic grade glass fiber as the principal sound-absorbing mechanism. Rectangular models utilize acoustical splitters, sometimes called baffles. Perforated metal and a Vibar™ film liner protects the glass fiber from erosion by the airflow. The glass fiber is also protected against contamination from elements in the airstream.

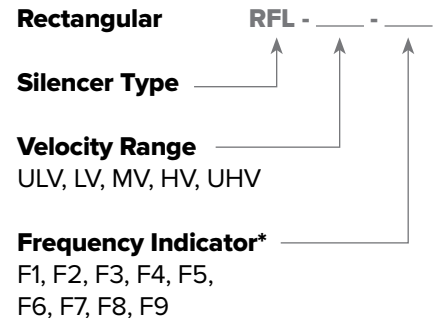
An acoustical spacer between the film liner and the perforated metal helps reduce the acoustic performance degradation caused by the film liner.

Splitters in rectangular models vary in quantity and thickness, and air passages also vary in width. The splitters are aerodynamically shaped to minimize pressure drop.

### Model Names

Vibro-Acoustics' silencer model names are coded to help identify their recommended application range.

\*The lower the Frequency Indicator, the better the silencer's insertion loss in the low frequency range. The higher the Frequency Indicator, the better the silencer's insertion loss in the mid to high frequency ranges.



### Applications

- > Wherever glass fiber is not desirable in direct contact with the airstream (e.g. health care, laboratory and clean room applications etc.)
- > In supply, return and exhaust ductwork
- > In fan plenums and air handling units (both supply and return)
- > On cooling towers, air-cooled chillers, etc.
- > On the receiver side of valves, dampers, terminal boxes, etc.
- > Normal recommended duct velocity range

RFL-ULV	0-500 fpm	RFL-HV	1250-2000 fpm
RFL-LV	0-750 fpm	RFL-UHV	2000-2500 fpm
RFL-MV	750-1250 fpm		

For velocities in excess of the RFL-UHV range see the [EX Model](#) and [RPL Silencers](#).

## Features and Benefits

- > Greatly reduces the potential for glass fiber particles to enter the airstream, especially in health care applications
- > Prevents contamination sources from entering the silencer media
- > Available in any cross-sectional dimensions to “fit-the-duct”
- > Modular unit sizes to fit ducts and air handling units without using transitions or large blank-off sections
- > Standard rectangular silencer lengths available in 36, 60, 84 and 108”; custom lengths up to 144” at no cost premium
- > Can be selected to suit the acoustic, space, or energy-cost requirements
- > Construction quality and aerodynamic design optimized to give reliable performance, best acoustics, lowest pressure drop and lowest overall cost
- > Splitters can be aligned vertically or horizontally to minimize extra pressure losses due to poor inlet or discharge flow conditions (e.g. near fans, elbows, etc.)
- > When break-out noise is of prime concern RFL silencers may be appropriate selections. They may require mass/stiffness added to their outer casing. Refer to [Silencer Selection Instructions](#) for proper silencer location.

## Cautions/When Not to Use RFL Silencers

- > When 3-5 equivalent duct diameters of straight, unobstructed duct are not available on both the silencer’s inlet or discharge; consider using Elbow Silencers, Transitional Silencers or Fan Silencers
- > When velocities exceed 2500 fpm for RFL silencers, consider RLP Silencers or EX Silencers
- > When no acoustical media whatsoever is acceptable in the airstream, consider No-Media Silencers
- > The acoustic performance of RFL silencers is generally less than RD silencers. Longer lengths may be required to achieve the insertion loss required.

## Performance Data/Testing

See [Performance Data](#) section.

Vibro-Acoustics’ 5th generation aero-acoustic laboratory was the first laboratory to be NVLAP accredited (Lab Code 100424-0) for the ASTM E-477 silencer test code. NVLAP is administered by the U.S. Dept. of Commerce.

## Silencer Selection and Location

Vibro-Acoustics offers multiple selection methods, from our complete analysis service to Do-It-Yourself quick selections. Refer to [Silencer Selection Instructions](#) for details.

## Standard Construction Features

- > Galvanized, lockformed casing constructed to SMACNA standards
- > 2” slip connection at each end
- > Aerodynamically shaped, galvanized nose at inlet
- > Galvanized gap plates between splitters to ensure close dimensional tolerances at air passages
- > Perforated galvanized splitters complete with perforated diffuser tail sections
- > Splitters filled with acoustic grade glass fiber under minimum 15% compression
- > Glass fiber carefully wrapped in Vibar™ film with lap joints away from splitter to reduce potential tearing of the Vibar™
- > 0.5 inch deep corrugated honeycomb “stand-off” spacer sheet placed between the perforated metal and the film

## Special Construction Options

- > Heavier gauge casings and perforated metal; continuously welded casings; special materials (e.g. stainless steel, aluminum)
- > Flanges; access doors
- > High transmission loss (HTL) casings to prevent break-out/break-in noise;
- > Built in transitions; removable splitters; flow measuring stations
- > For details of above and more special options see [Special Construction Options](#).